

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Previously Presented) A method comprising:  
determining a coding type for a speech signal via a transcoder and rate adaptor unit (TRAU);  
determining a set of bits associated with each transport channel of at least two transport channels corresponding to the speech signal via the TRAU;  
determining a priority for each set of bits associated with each transport channel via the TRAU; and  
inserting into a generic TRAU frame, via the TRAU, each set of bits according to the determined priority of each set of bits, wherein the generic TRAU frame is adaptable for use with different codecs.
2. (Previously Presented) A method according to claim 1, further comprising:  
determining if error checking is required for one or more of the at least two transport channels;  
computing error check bits for each transport channel that requires error checking;  
and  
inserting into the generic TRAU frame the computed error check bits associated with each transport channel that requires error checking.
3. (Previously Presented) A method according to claim 1, further comprising inserting control bits into the generic TRAU frame.
4. (Previously Presented) A method according to claim 3, wherein the control bits are inserted at a reserved location in the generic TRAU frame.
5. (Previously Presented) A method according to claim 3, wherein the control bits include a transport format combination indicator.

6. (Previously Presented) A method according to claim 2, wherein the at least two transport channels comprise a set of class A bits associated with a first transport channel and a set of class B bits associated with a second transport channel, wherein at least a portion of the class A bits comprises a set of cyclic redundancy check bits associated with a cyclic redundancy check, and wherein the generic TRAU frame includes, in sequence, the set of class A bits, the set of cyclic redundancy check bits, and the set of Class B bits.

7. (Previously Presented) A method according to claim 6, wherein the generic TRAU frame comprises an initial set of control bits.

8. (Previously Presented) A method according to claim 7, wherein the set of cyclic redundancy bits are compiled based on at least one control bit.

9. (Previously Presented) A method comprising  
determining a coding type for a speech signal via a converter;  
locating within a generic TRAU frame, via the converter, a set of bits  
corresponding to each transport channel of a plurality of transport channels based on the coding type, wherein the generic TRAU frame is adaptable for use with different codecs; and  
decoding the plurality of transport channels based on the corresponding set of bits in accordance with the determined coding type.

10. (Previously Presented) A method according to claim 9, further comprising:  
locating error check bits associated with a first transport channel of the plurality of transport channels; and  
based on the located error check bits, error checking the first transport channel.

11. (Previously Presented) A method according to claim 9, further comprising  
locating a set of control bits, said control bits including an indication of the coding type of the speech signal.

12. (Previously Presented) A method according to claim 11, wherein said set of control bits includes a transport format combination identifier.

13.-37. (Canceled)

38. (Previously Presented) A method according to claim 1, wherein the step of inserting comprises inserting a higher priority set of bits into the generic TRAU frame before inserting a lower priority set of bits into the generic TRAU frame.

39. (Canceled)

40. (Previously Presented) A method according to claim 1, further comprising encoding the speech signal to generate a plurality of speech coefficients.

41. (Previously Presented) A method according to claim 3, wherein the control bits comprise at least one of an indication of a number of transport channels included in the generic TRAU frame, a location in the generic TRAU frame of each set of bits associated with each transport channel, an indication of if error checking applies to the sets of bits inserted in the generic TRAU frame, and a location in the generic TRAU frame of error checking information if error checking applies.

42. (Previously Presented) A method according to claim 5, wherein the transport format combination indicator indicates the coding type.

43. (Previously Presented) A method according to claim 1, wherein the generic TRAU frame is configured via a configuration message used to configure a flexible layer one protocol.

44. (Previously Presented) A method according to claim 9, further comprising receiving the generic TRAU frame at a mobile station.

45. (Canceled)

46. (Previously Presented) A method according to claim 9, wherein the step of decoding comprises mapping each located set of bits into a required format associated with the coding type.

47. (Previously Presented) A transcoder and rate adaptor unit (TRAU) comprising:  
a converter configured to:

determine a coding type for a speech signal;

determine a set of bits associated with each transport channel of a plurality of transport channels of the speech signal;

determine a priority for each set of bits; and

insert into a generic TRAU frame the sets of bits associated with each transport channel of the plurality of transport channels according to the determined priority of each set of bits, wherein the generic TRAU frame is adaptable for use with different codecs.

48. (Canceled)

49. (Previously Presented) A TRAU according to claim 47, further comprising a codec configured to encode a signal.

50. (Previously Presented) A TRAU according to claim 49, wherein the codec is further configured to generate a plurality of speech coefficients.

51. (Previously Presented) A TRAU according to claim 47, wherein the converter is further configured to insert a higher priority set of bits into the generic TRAU frame before inserting a lower priority set of bits into the generic TRAU frame.

52. (Previously Presented) A TRAU according to claim 47, wherein the converter is further configured to:

determine if error checking is required for a transport channel of the at least two transport channels;

compute error check bits for each transport channel that requires error checking;  
and

insert in the generic TRAU frame the computed error check bits associated with each transport channel that requires error checking.

53. (Previously Presented) A TRAU according to claim 47, wherein the converter is further configured to insert control bits into the generic TRAU frame.

54. (Previously Presented) A TRAU according to claim 53, wherein the control bits are inserted at a reserved location in the generic TRAU frame.

55. (Previously Presented) A TRAU according to claim 53, wherein the control bits include a transport format combination indicator.

56. (Previously Presented) A TRAU according to claim 55, wherein the transport format combination indicator indicates the coding type.

57. (Previously Presented) A TRAU according to claim 53, wherein the control bits comprise at least one of an indication of a number of transport channels included in the generic TRAU frame, a location in the generic TRAU frame of the set of bits associated with each transport channel, an indication of if error checking applies to the sets of bits of the generic TRAU frame, and a location in the generic TRAU frame of error checking information if error checking applies.

58. (Previously Presented) A TRAU according to claim 47, wherein the plurality of transport channels comprise a set of class A bits associated with a first transport channel and a set of class B bits associated with a second transport channel, wherein at least a portion of the class A bits comprises a set of cyclic redundancy check bits associated with a cyclic redundancy check, and wherein the generic TRAU frame includes, in sequence, the set of class A bits, the set of cyclic redundancy check bits, and the set of Class B bits.

59. (Previously Presented) A TRAU according to claim 58, wherein the generic TRAU frame comprises an initial set of control bits.

60. (Previously Presented) A TRAU according to claim 59, wherein the set of cyclic redundancy bits are compiled based on at least one control bit.

61. (Previously Presented) A transcoder and rate adaptor unit (TRAU) comprising:  
a converter configured to  
determine a coding type for the speech signal;  
locate a set of bits within a generic TRAU frame, wherein the set of bits correspond to each transport channel of a plurality of transport channels based on the coding type, and wherein the generic TRAU frame is adaptable for use with different codecs; and  
decode the plurality of transport channels based on the corresponding set of bits in accordance with the determined coding type.

62. (Previously Presented) A TRAU according to claim 61, wherein the converter is further configured to:

locate error check bits associated with a first transport channel of the plurality of transport channels; and

based on the located error check bits, error check the first transport channel.

63. (Previously Presented) A TRAU according to claim 61, wherein the converter is further configured to locate a set of control bits, wherein the set of control bits include an indication of the coding type of the speech signal.

64. (Previously Presented) A TRAU according to claim 63, wherein the set of control bits includes a transport format combination identifier.

65.-66. (Canceled)

67. (Previously Presented) A TRAU according to claim 61, wherein the converter is further configured to map each located set of bits into a required format associated with the coding type.

68. (Previously Presented) A tangible computer-readable medium having stored thereon, computer-executable instructions that, if executed by a computing device, cause the computing device to perform a method comprising:

determining a coding type for a speech signal;

determining a set of bits associated with each transport channel of at least two transport channels corresponding to the speech signal;

determining a priority for each set of bits associated with each transport channel;

and

inserting each set of bits into a generic transcoder and rate adaptor unit (TRAU) frame according to the determined priority of each set of bits, wherein the generic TRAU frame is adaptable for use with different codecs.

69. (Canceled)

70. (Previously Presented) A tangible computer-readable medium according to claim 68, wherein the step of inserting further comprises inserting a higher priority set of bits into the generic TRAU frame before inserting a lower priority set of bits into the generic TRAU frame.

71. (Previously Presented) A tangible computer-readable medium according to claim 68, wherein the instructions cause the computing device to perform a method further comprising:

determining if error checking is required for a transport channel of the at least two transport channels;

computing error check bits for each transport channel that requires error checking;

and

inserting in the generic TRAU frame the computed error check bits associated with each transport channel that requires error checking.



72. (Previously Presented) A tangible computer-readable medium having stored thereon, computer-executable instructions that, if executed by a computing device, cause the computing device to perform a method comprising:

determining a coding type for a speech signal;

locating a set of bits within a generic transcoder rate adaptor unit (TRAU) frame, wherein the set of bits correspond to each transport channel of a plurality of transport channels based on the coding type, and wherein the generic TRAU frame is adaptable for use with different codecs; and

decoding the plurality of transport channels based on the corresponding set of bits in accordance with the determined coding type.

73. (Previously Presented) A tangible computer-readable medium according to claim 72, wherein the instructions cause the computing device to perform a method further comprising:

locating error check bits associated with a first transport channel of the plurality of transport channels; and

based on the located error check bits, error checking the first transport channel.

74. (Previously Presented) A tangible computer-readable medium according to claim 72, wherein the instructions cause the computing device to perform a method further comprising receiving the generic TRAU frame.

75. (Canceled)

76. (Previously Presented) A tangible computer-readable medium according to claim 72, wherein the instructions cause the computing device to perform a method further comprising mapping each located set of bits into a required format associated with the coding type.

77. (Previously Presented) A network element comprising:  
a transcoder and rate adaptor unit (TRAU) configured to:  
determine a coding type for a speech signal;



determine a set of bits associated with each transport channel of a plurality of transport channels of the speech signal;

determine a priority for each set of bits; and

insert into a generic TRAU frame the sets of bits associated with each transport channel of the plurality of transport channels according to the determined priority of each set of bits, wherein the generic TRAU frame is adaptable for use with different codecs.